

IN THE DRAWINGS:

Please cancel the original FIGURES, and substitute therefor FIGS 1 through 3 as attached.

IN THE CLAIMS:

Please cancel claims 1 through 9 without prejudice.

Please enter new claims 10 through 29 as follow:

ai 10. ~~A waste liquid treatment system comprising the following:
a plurality of flow control elements presenting a plurality of waste liquid flow control surfaces; and
biofilm covering at least some of the waste liquid flow control surfaces;
whereby the flow control surfaces are adapted and constructed to produce alternating venturis and variable speed vortices as waste liquid flows through the flow control elements.~~

11. A waste liquid treatment system according to claim 10, wherein each of the flow control elements comprises a series of fins and vanes forming the water flow control surfaces.

12. A waste liquid treatment system according to claim 11, wherein each of the flow control elements comprises the following:

an inner member having a longitudinal axis, with a plurality of vanes extending radially from the longitudinal axis; and

a cylindrical outer member surrounding the inner member, the cylindrical outer member having an outer surface including a plurality of radially projecting longitudinal fins formed thereon.

13. A waste liquid treatment system according to claim 12, wherein the inner member comprises eight vanes.

14. A waste liquid treatment system according to claim 12, wherein the cylindrical outer member is provided with four fins.

15. A waste liquid treatment system according to claim 10, wherein the flow control elements are formed from a plastic material.

16. A waste liquid treatment system according to claim 10, wherein the biofilm is formed by a biofilm-expressing bacteria.

17. A waste liquid treatment system according to claim 16, wherein the biofilm comprises a pseudomonous species based biofilm.

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cont.

18. A waste liquid treatment system according to claim 16, wherein the biofilm comprises a sulfur-reducing bacteria species.

19. A waste liquid treatment system according to claim 16, wherein the biofilm comprises an indemnic biofilm.

20. A waste liquid treatment system according to claim 16, wherein the biofilm comprises a seeding biofilm.

21. A method of treating waste liquid, the method comprising the following steps:

providing a plurality of flow control elements presenting a plurality of waste liquid flow control surfaces;

covering at least some of the waste liquid flow control surfaces with a biofilm; and
causing waste liquid to flow through the flow control elements to produce alternating venturis and variable speed vortices as waste liquid flows through the flow control elements.

22. A method of treating waste liquid according to claim 21, wherein the step of providing a plurality of flow control elements comprises providing flow control elements having a series of fins and vanes forming the water flow control surfaces.

23. A method of treating waste liquid according to claim 22, wherein the step of providing a plurality of flow control elements comprises providing flow control elements comprising the following:

an inner member having a longitudinal axis, with a plurality of vanes extending radially from the longitudinal axis; and

a cylindrical outer member surrounding the inner member, the cylindrical outer member having an outer surface including a plurality of radially projecting longitudinal fins formed thereon.

24. A method of treating waste liquid according to claim 23, wherein the step of providing a plurality of flow control elements comprises providing flow control elements having an inner member with eight vanes.

25. A method of treating waste liquid according to claim 23, wherein the step of providing a plurality of flow control elements comprises providing flow control elements having a cylindrical outer member provided with four fins.

26. A method of treating waste liquid according to claim 21, wherein the step of providing a plurality of flow control elements comprises providing flow control elements formed from a plastic material.

27. A method of treating waste liquid according to claim 23, wherein the step of covering at least some of the waste liquid flow control surfaces with a biofilm comprises covering at least some of the waste liquid flow control surfaces with a biofilm-expressing bacteria.

28. A method of treating waste liquid according to claim 23, wherein the step of covering at least some of the waste liquid flow control surfaces with a biofilm comprises covering at least some of the waste liquid flow control surfaces with an indemnic biofilm.

29. A method of treating waste liquid according to claim 23, wherein the step of covering at least some of the waste liquid flow control surfaces with a biofilm comprises covering at least some of the waste liquid flow control surfaces with a seeding biofilm.

REMARKS

Claims 1 and 2 stand rejected.

Claims 2 through 9 have been withdrawn from consideration.

Claims 1 through 9 have been canceled.

Claims 10 through 29 have been presented to more particularly point out and distinctly claim that which Applicant regards as his invention.

Claims 10 through 29 remain in the application.

This amendment is made to place the claims in condition for allowance. In the alternative, this amendment is made to place the claims into better form for consideration on appeal. Reconsideration and re-examination of the claims, as amended, is respectfully requested.